#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

### WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-025172 Address: 333 Burma Road **Date Inspected:** 01-Nov-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai

**CWI Name:** Tian Lei **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector R. Hernandez was present during the time noted above and conducted observations relative to the work being performed.

The QA Inspector randomly observed the following work in progress:

#### Bay Number 1

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1C-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15214.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1C-003 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15214.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB10-004 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15214.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1-025 for the following designated weld number(s): 001~179. This QA inspector signed

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green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1-040 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1-056 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB10-002 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB10-003 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB10-005 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E5-SB1B-002 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15212.

Bay Number 2

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB4-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB1D-010 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB1D-021 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB3-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

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Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB8-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB1-013 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB5-016 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB5-017 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB7-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB1C-005 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

Performed verification VT for the component(s) and corresponding welds for component on OBG Barrier Rail assembly listed as E2-SB2-001 for the following designated weld number(s): 001~179. This QA inspector signed green tag #15213.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 820 & 821. Welder is identified as welder no. 069712. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 593 & 594. Welder is identified as welder no. 067877. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 313 & 314. Welder is identified as welder no. 066673. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG

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anchorage plate assembly identified as AP3032-001 weld number(s) 512 & 513. Welder is identified as welder no. 201583. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 844 & 845. Welder is identified as welder no. 066236. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 424 & 425. Welder is identified as welder no. 045280. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

FCAW welding of complete joint penetration and partial penetration weld joint(s) located on lift 14 OBG anchorage plate assembly identified as AP3032-001 weld number(s) 1018 & 1019. Welder is identified as welder no. 068852. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-13-P-2333-TC-P4-F and WPS-B-T-2233-TC-U4b-F.

#### Bay Number 3

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Longitudianl Diaphragm component identified as LD3040-001 weld number(s) 081, 085, 097, & 101. Welder is identified as welder no. 206623. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2232-TC-U4b-F.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG sub assembly identified as SA3324-001 weld number(s) 036. Welder is identified as welder no. 204339. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2232-TC-U4b-F.

FCAW welding of fillet weld joint(s) located on lift 14 OBG sub assembly identified as SA3359-001 weld number(s) 013, 014, 016, 017, 022, & 023. Welder is identified as welder no. 217805. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2132-3.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Sub Assembly component identified as SA3325-001 weld number(s) 037 & 074. Welder is identified as welder no. 204339. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2232-TC-U4b-F.

FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Rib Stiffener component identified as RS30110C-001 weld number(s) 001. Welder is identified as welder no. 044830. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2231-TC-U4b-F.

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FCAW welding of complete joint penetration weld joint(s) located on lift 14 OBG Rib Stiffener component identified as RS3064-001 weld number(s) 001. Welder is identified as welder no. 050491. The welding variables recorded by ZPMC QC identified as Wai Tao appeared to comply with applicable WPS(s) WPS-B-T-2231-TC-U4b-F.

ZPMC personnel heat straightening Orthotropic Box Girder (OBG) longitudinal diaphragm component identified as LD3041-001. Distortion appeared to be caused by welding. ZPMC Quality Control (QC) inspector identified as Mr. Chen Xi was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) no. HSR1-9734.

Bay Number 4

This inspector did not observe any welding or contract work in this bay today.

Unless otherwise noted above all items observed on this day appeared to be in general compliance with the applicable contract documents

### **Summary of Conversations:**

Pertinent conversations are included in the body of the report.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 1500-0042-02372, who represents the Office of Structural Materials for your project.

Inspected By:	Hernandez,Rene	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer